

Bundle 3 Review: Organisms and Their Environment

OBJECTIVES

- ♦ I can describe the biotic and abiotic parts of an ecosystem in which organisms interact.
- ♦ I can diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem.

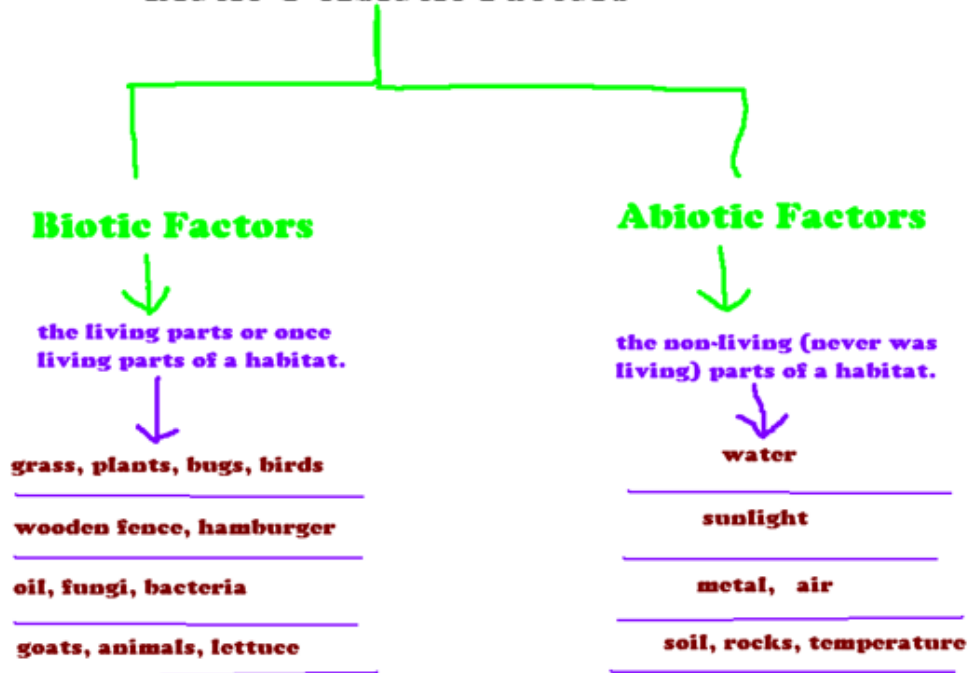
Questions to Consider

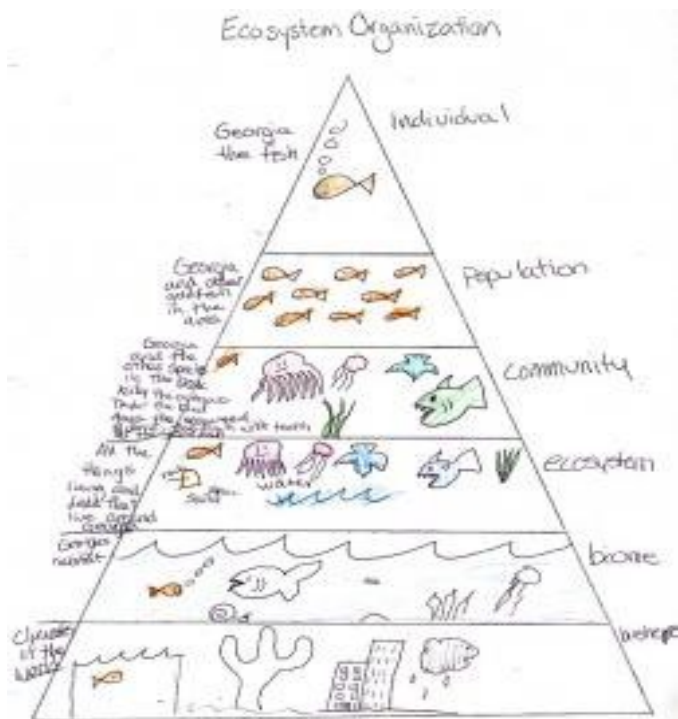
- What are the levels of organization within an ecosystem?
- How does an organism interact with its environment?
- How are descriptive field investigations used in science?

Biotic: made of cells; is living or used to be living

Abiotic: made of atoms and molecules; is not living and never has lived

Biotic & Abiotic Factors





Organism:

one individual

Population:

2 or more organism that are ONE species

Community:

2 or more populations that live in the same area

Ecosystem: all of the biotic and abiotic factors in an area

Q: What is a descriptive field investigation?

A: In descriptive field investigations researchers describe parts of a natural system.

The 10% Rule

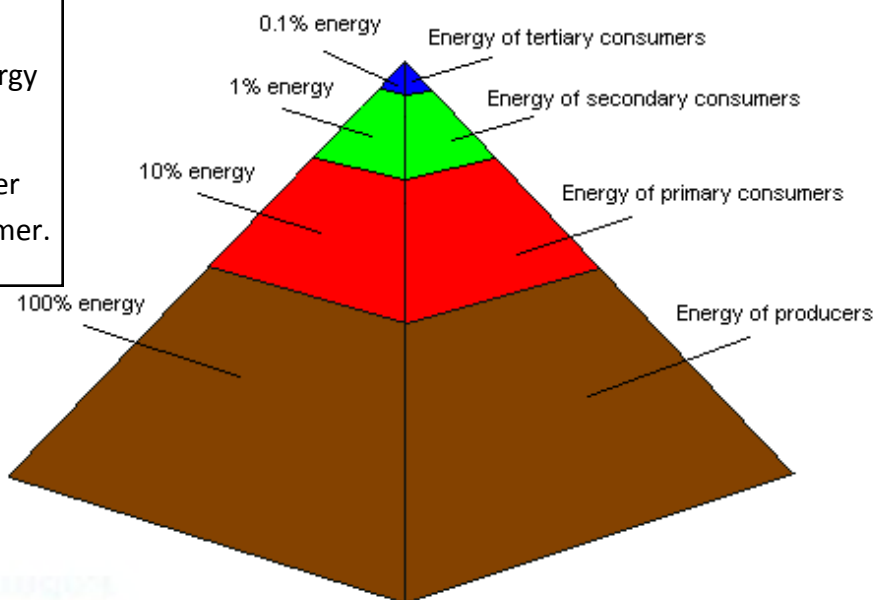
Producers contain 100% of the total energy available in an ecosystem.

Only about 10% of the energy a consumer eats is available for the next level consumer.

Limiting Factors

Affect the size of a population which affects the community.

Ecological Pyramid



Factors That Limit Populations

	Factors that cause a population to increase	Factors that cause a population to decrease
Abiotic	<ul style="list-style-type: none"> favourable light favourable temperature favourable chemical environment 	<ul style="list-style-type: none"> too much or too little light too cold or too warm unfavourable chemical environment
Biotic	<ul style="list-style-type: none"> sufficient food low number or low effectiveness of predators few or weak diseases and parasites ability to compete for resources 	<ul style="list-style-type: none"> insufficient food high number or high effectiveness of predators many or strong diseases and parasites inability to successfully compete for resources

SYMBIOSIS

Mutualism: both benefit	Commensalism: one benefits, one is not affected	Parasitism: one benefits, one is harmed
